

WHAT IS CLAIMED IS:

1. A belt driving apparatus comprising:
 - a toothed pulley;
 - an endless toothed belt wound on said pulley, wherein a first surface of said toothed belt comprises teeth corresponding to teeth of said pulley and a second surface of said toothed belt is substantially smooth;
 - an auxiliary roller for holding said toothed belt in a gap defined by said pulley and said auxiliary roller;
 - a roller holding unit for holding said pulley and said auxiliary roller to be able to respectively rotate on axes of said pulley and said auxiliary roller and maintaining said gap between said pulley and said auxiliary roller; and
 - an urging member for urging said roller holding unit in a direction to said toothed belt around said pulley in order for said auxiliary roller hold by said roller holding unit to provide a tension to said toothed belt.
2. A belt driving apparatus as claimed in claim 1, further comprising a motor for providing a driving force, wherein said pulley is coupled to said motor and rotated due to said driving force.
3. A belt driving apparatus as claimed in claim 1, wherein said auxiliary roller provides said tension to said toothed belt at an engagement end point where said pulley is disengaged from said toothed belt when said toothed belt is rotated in a forward direction.
4. A belt driving apparatus as claimed in claim 3, wherein

said engagement end point is a point where said pulley becomes to be engaged with said toothed belt when said toothed belt is rotated in a reverse direction.

5. A belt driving apparatus as claimed in claim 1, wherein a distance between centers of axes of said pulley and said auxiliary roller is shorter than a sum of a radius of said auxiliary roller, a radius of said pulley, which is determined to be a distance from the center of said axis to a top end of a tooth of said pulley, and a distance from said second surface to a top end of a tooth of said toothed belt.

6. A belt driving apparatus as claimed in claim 1, wherein a radius of said axis of said auxiliary roller near the center of said axis in its axial direction is larger than a radius of said axis of said auxiliary roller at its other part in its axial direction.

7. A belt driving apparatus as claimed in claim 1, wherein said roller holding unit holds said axes of said pulley and said auxiliary roller by inserting therein said axes, a first cut-in portion is formed on said roller holding unit, said first cut-in portion being continued from a first side end, where said toothed belt is wound, to a first holding point where said axis of said pulley is hold, and a second cut-in portion is formed on said roller holding unit, said first cut-in portion being continued from a second side end, which is opposite to said first side end from which said pulley is inserted, to a second holding point where said axis of said auxiliary roller is hold.

8. A liquid ejecting apparatus for recording a medium to be recorded at a recording area, comprising:

a motor for providing a driving force;

a toothed driving pulley rotated by said driving force;

an endless toothed belt wound on said driving pulley for conveying said driving force of said driving pulley, wherein a first surface of said toothed belt comprises teeth corresponding to teeth of said driving pulley and a second surface of said toothed belt is substantially smooth;

a transfer gear, on which said toothed belt is wound, rotated by said driving force conveyed by said toothed belt;

a transfer roller for carrying said medium to be recorded to said recording area, said transfer roller being rotated integrally with said transfer gear; and

an auxiliary roller for holding said toothed belt in a gap defined by said pulley and said auxiliary roller.

9. A liquid ejecting apparatus as claimed in claim 8, further comprising:

a roller holding unit for holding said driving pulley and said auxiliary roller to be able to respectively rotate on axes of said pulley and said auxiliary roller and maintaining said gap between said pulley and said auxiliary roller; and

an urging member for urging said roller holding unit in a direction to said toothed belt around said pulley in order for said auxiliary roller hold by said roller holding unit to provide a tension to said toothed belt.